

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (cancelled):

Claim 2 (cancelled):

Claim 3 (cancelled):

Claim 4 (cancelled):

Claim 5 (cancelled):

Claim 6 (cancelled):

Claim 7 (cancelled):

Claim 8 (cancelled):

Claim 9 (cancelled):

Claim 10 (cancelled):

Claim 11 (currently amended): An apparatus for the purification of catalytic cracking gasolines containing dienic and/or impurities, acetylenic impurities, or both, and mercaptans, said apparatus comprising:

at least one selective hydrogenation reactor 3 containing at least one fixed catalyst bed, and said at least one selective hydrogenation reactor having at least one line 4 for introducing a

feed, at least one effluent outlet line, and a at least one line for supplying hydrogen to the said at least one hydrogenation reactor, said reactor being followed by

at least one stabilization drum 4 connected to said at least one effluent outlet line, the said at least one stabilization drum having at least one gas outlet line 5 and at least one stabilized effluent outlet line, and said effluent passing into

at least one sweetening reactor 8 comprising at least one effluent inlet line, 6 and at least one sweetened effluent outlet line, said reactor having close thereto and at least one oxidizing agent supply line, wherein said effluent inlet line is in fluid communication with said at least one stabilized effluent outlet line,

said apparatus also further comprising at least one drum 9 for degassing the effluent from the said at least one sweetening reactor 8, said at least one drum 9 for degassing effluent having an inlet in fluid communication with said at least one effluent sweetened outlet line of said at least one sweetening reactor, at least one gas outlet line and at least one outlet line 11 for dedienized, stabilized and sweetened gasoline outlet line.

(2)
cont.

Claim 12 (currently amended): An apparatus according to claim 11, further comprising at least one recycle line 12 for recycling stabilized effluent from said at least one stabilized effluent outlet line to the said at least one selective hydrogenation reactor.

Claim 13 (currently amended): An apparatus according to claim 11, further comprising at least one recycle line 13 for recycling dedienized, stabilized and sweetened gasoline from said dedienized, stabilized and sweetened gasoline outlet line to the said at least one selective hydrogenation reactor.

(3)

Claim 14 (currently amended): An apparatus according to claim 12, further comprising at least one further recycle line 13 for recycling dedienized, stabilized and sweetened gasoline from said dedienized, stabilized and sweetened gasoline outlet line to said at least one selective hydrogenation reactor.

Claim 15 (new): An apparatus according to claim 11, wherein said at least one selective hydrogenation reactor contains a catalyst comprising 0.1-1 weight % palladium deposited on an inert support.

Claim 16 (new): An apparatus according to claim 15, wherein said catalyst comprises 0.2-0.5 weight % palladium deposited on an inert support.

Claim 17 (new): An apparatus according to claim 11, wherein said at least one selective hydrogenation reactor contains a catalyst comprising 1-20% by weight nickel deposited on an inert support.

C4

Claim 18 (new): An apparatus according to claim 17, wherein said catalyst comprises 5-15% weight nickel deposited on an inert support.

Claim 19 (new): An apparatus according to claim 15, wherein said catalyst further comprises 1-20 weight % nickel.

Claim 20 (new): An apparatus according to claim 15, wherein said catalyst further comprises gold and the Au-Pd ratio is 0.1 or more.

Claim 21 (new): An apparatus according to claim 11, wherein said at least one line for supplying hydrogen to said at least one selective hydrogenation reactor is in fluid communication with said at least one line for introducing a feed.

Claim 22 (new): An apparatus according to claim 20, wherein said at least one selective hydrogenation reactor further comprises a second line for supplying hydrogen which is connected directly to said at least one hydrogenation reactor.

Claim 23 (new): An apparatus according to claim 11, wherein said at least one selective

hydrogenation reactor contains two catalytic zones and a second line for supplying hydrogen to said at least one selective hydrogenation reactor, wherein said second line for supplying hydrogen is connected to said at least one selective hydrogenation reactor at a point between said two catalytic zones.

Claim 24 (new): An apparatus according to claim 11, wherein said at least one sweetening reactor is in fluid communication with a source of an aqueous solution of an alkaline base containing a metal chelate catalyst via said at least one oxidizing agent supply line.

*Ch
cont.*

Claim 25 (new): An apparatus according to claim 11, wherein said at least one sweetening reactor contains a supported catalyst comprising a metal chelate.

Claim 26 (new): An apparatus according to claim 11, wherein said at least one sweetening reactor contains a porous catalyst comprising 10 -98 wt% of at least one solid mineral phase constituted by an alkaline aluminosilicate having an Si/Al atomic ratio of 5 or less, 1-6 wt% of activated charcoal, 0.02-2 wt% of at least one metal chelate, and 0-20 wt% of at least one mineral or organic binder.

Claim 27 (new): An apparatus according to claim 25, wherein said metal chelate is a metal phthalocianine.

Claim 28 (new): An apparatus according to claim 26, wherein said metal chelate is a metal phthalocianine.